

# Monetary Stability

The Hong Kong dollar exchange rate remained broadly stable throughout 2015 despite turbulent financial market conditions and the US interest rate lift-off in December. The money market also continued to function normally with ample interbank liquidity. As the cornerstone of Hong Kong's monetary and financial stability over the past few decades, the Linked Exchange Rate System continued to be highly resilient to external shocks.

## OBJECTIVES

The overriding objective of Hong Kong's monetary policy is currency stability. This is defined as a stable external exchange value of Hong Kong's currency, in terms of its exchange rate in the foreign-exchange market against the US dollar, within a band of HK\$7.75 – 7.85 to US\$1. The structure of the monetary system is characterised by Currency Board arrangements, requiring the Monetary Base to be at least 100% backed by US dollar reserves held in the Exchange Fund, and changes in the Monetary Base to be 100% matched by corresponding changes in US dollar reserves.

The Monetary Base (Table 1) comprises

- Certificates of Indebtedness, which provide full backing to the banknotes issued by the three note-issuing banks
- Government-issued notes and coins in circulation
- the Aggregate Balance, which is the sum of clearing account balances of banks kept with the HKMA
- Exchange Fund Bills and Notes issued by the HKMA on behalf of the Government.

The stability of the Hong Kong dollar exchange rate is maintained through an automatic interest rate adjustment mechanism and the firm commitment by the HKMA to honour the Convertibility Undertakings (CUs). When the demand for Hong Kong dollars is greater than the supply and the market exchange rate strengthens to the strong-side CU of HK\$7.75 to one US dollar, the HKMA stands ready to sell Hong Kong dollars to banks for US dollars. The Aggregate Balance will then expand to push down Hong Kong dollar interest rates, creating monetary conditions that move the Hong Kong dollar away from the strong-side limit to within the Convertibility Zone of 7.75 to 7.85. Conversely, if the supply of Hong Kong dollars is greater than demand and the market exchange rate weakens to the weak-side CU of HK\$7.85 to one US dollar, the HKMA will buy Hong Kong dollars from banks. The Aggregate Balance will then contract to drive Hong Kong dollar interest rates up, pushing the Hong Kong dollar away from the weak-side limit to stay within the Convertibility Zone.

**Table 1** **Monetary Base**

HK\$ million	31 December 2015	31 December 2014
Certificates of Indebtedness <sup>1</sup>	<b>360,165</b>	342,165
Government-issued currency notes and coins in circulation <sup>1</sup>	<b>11,408</b>	11,092
Balance of the banking system	<b>391,343</b>	239,183
Exchange Fund Bills and Notes (EFBN) issued <sup>2</sup>	<b>829,791</b>	753,546
<b>TOTAL</b>	<b>1,592,707</b>	1,345,986

<sup>1</sup> The Certificates of Indebtedness and the government-issued currency notes and coins in circulation shown here are stated at Hong Kong dollar face values. The corresponding items shown in the balance sheet of the Exchange Fund in this Annual Report are in Hong Kong dollars equivalent to the US dollar amounts required for their redemption at the prevailing exchange rates on the balance sheet date. This arrangement is in accordance with the accounting principles generally accepted in Hong Kong.

<sup>2</sup> The amount of EFBN shown here is different from that in the balance sheet of the Exchange Fund in this Annual Report. In accordance with the accounting principles generally accepted in Hong Kong, the EFBN held by the HKMA on behalf of the Exchange Fund in relation to its trading of the EFBN in the secondary market are offset against the EFBN issued, and the net amount is recorded in the balance sheet.

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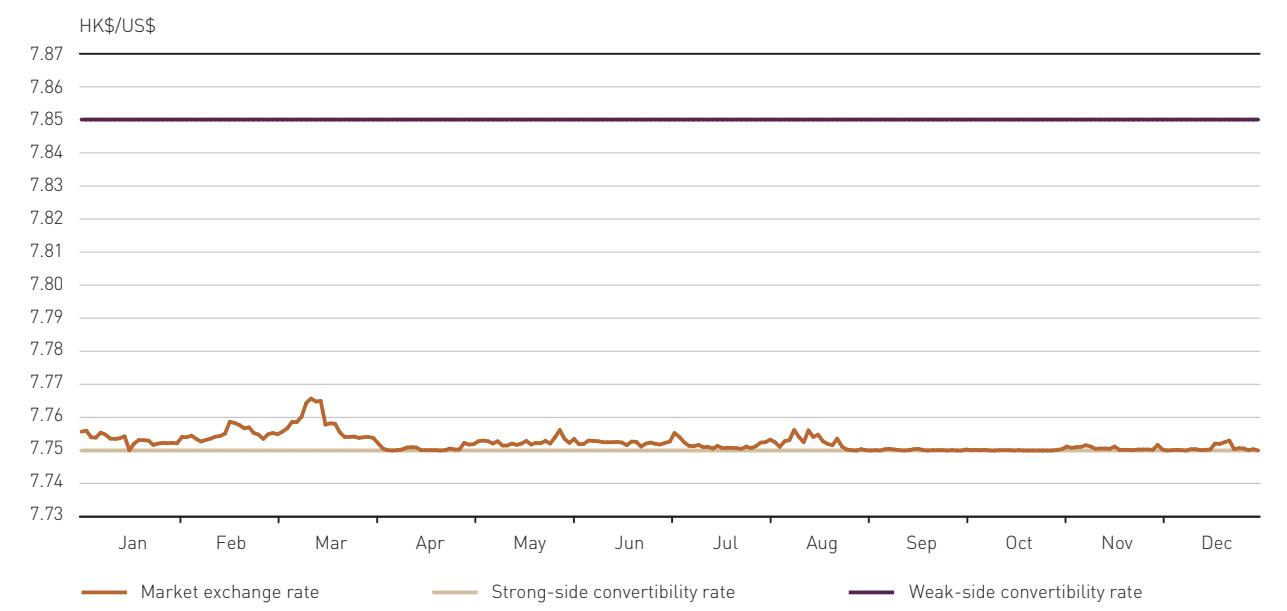
## REVIEW OF 2015

### Exchange-rate stability

The Hong Kong dollar exchange rate remained broadly stable in 2015, trading within a narrow range of 7.7500 to 7.7657 against the US dollar (Chart 1). In the early part of 2015, the Hong Kong dollar was under slight weakening pressures amid market concerns about the US interest rate lift-off. However, the Hong Kong dollar exchange rate strengthened close to 7.75 during the second quarter, with the strong-side CU being triggered repeatedly in April mainly due to a surge in equity-related demand for the Hong Kong dollar amid buoyant stock market activities. Moving into the second half of the year, the Hong Kong dollar exchange rate continued to hover

close to 7.75 against the US dollar in August, despite the notable sell-off in Hong Kong and Mainland's equity markets, and increased volatilities in the global currency markets (including the renminbi). Driven by conversions of the offshore renminbi into the Hong Kong dollar, the strong-side CU was triggered again in September and October. While the US Federal Open Market Committee (FOMC) raised the target range for the Federal Funds Rate by 25 basis points in mid-December, the Hong Kong dollar continued to move within a tight range against the US dollar without notable outflow pressures. Overall, the Hong Kong dollar exchange market operated in an orderly manner throughout 2015, despite the turbulent global financial market conditions.

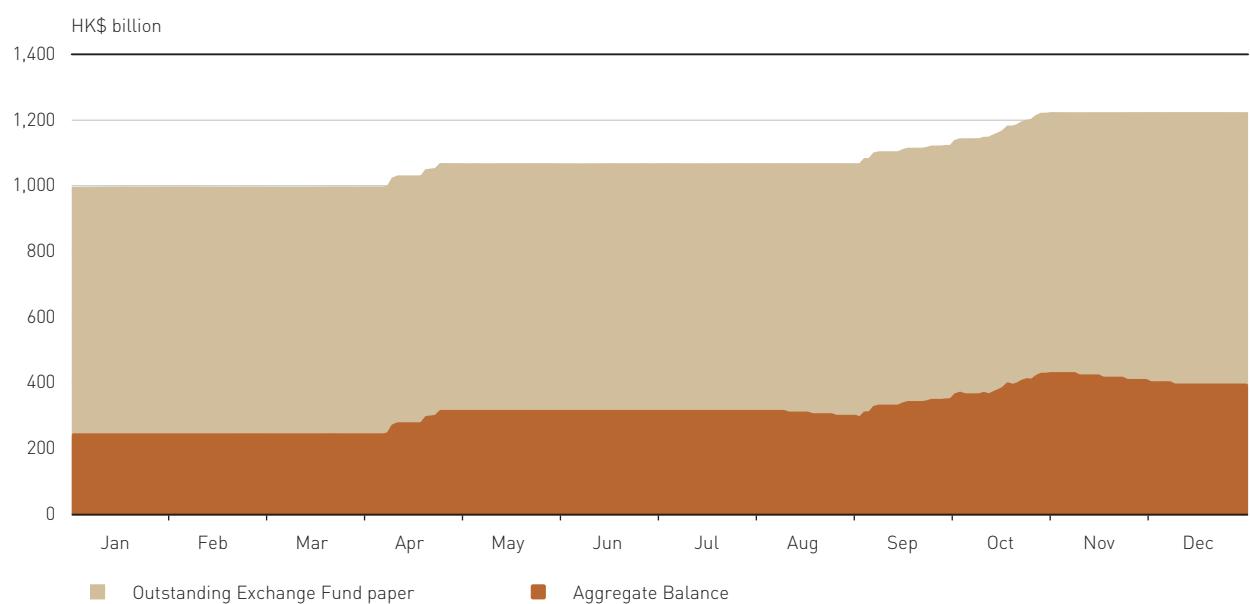
**Chart 1** Market exchange rate in 2015



As the strong-side CU was repeatedly triggered in April, September and October, the HKMA passively purchased a total of US\$29.3 billion from banks in exchange for HK\$227.2 billion, in accordance with the Currency Board principles. This led to a corresponding expansion in the Aggregate Balance, with part of the expansion being offset by additional issuance of Exchange Fund Bills in response to banks' strong demand for liquidity management

[Chart 2]. The additional issuance of Exchange Fund paper is consistent with Currency Board principles, as it represents a change in the composition of the Monetary Base with the Monetary Base fully backed by foreign exchange reserves. The total of Aggregate Balance and outstanding Exchange Fund Bills and Notes increased to HK\$1,221.0 billion at the end of 2015 from HK\$992.5 billion a year earlier.

**Chart 2 Aggregate Balance and outstanding Exchange Fund paper in 2015**



### Money market

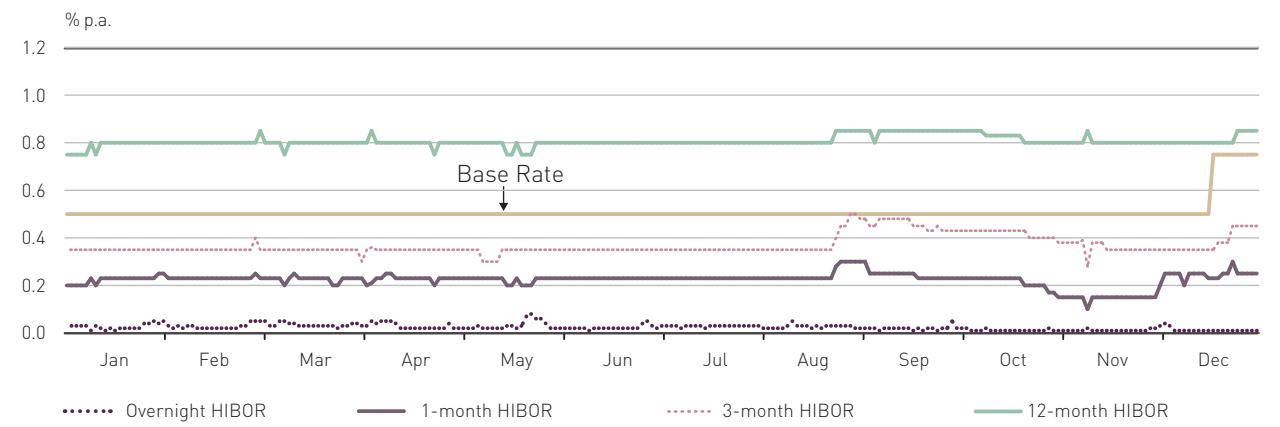
With ample liquidity in the banking system, Hong Kong dollar interbank interest rates remained low throughout 2015. As the target range for the US Federal Funds Rate was adjusted upwards from 0–0.25% to 0.25–0.5% on 16 December (US time), the Base Rate was also adjusted upwards from 0.5% to 0.75% on 17 December according to the pre-set formula.<sup>1</sup> For 2015 as a whole, interbank interest rates for tenors from overnight to three months stayed below the Base Rate [Chart 3], with moderate

fluctuations driven by banks' seasonal liquidity needs and tightened liquidity amid volatile financial market conditions in August. Broadly tracking the spreads between the Hong Kong Interbank Offered Rate (HIBOR) and the London Interbank Offered Rate (LIBOR), the Hong Kong dollar forward points turned to notable premiums in August amid tightened market liquidity, and then subsequently dipped into discounts towards the end of the year due to the broad-based increases in the US dollar interest rates [Chart 4]. Overall, the money market continued to function normally. Discount Window borrowing was not active, amounting to only HK\$2.8 billion in 2015.

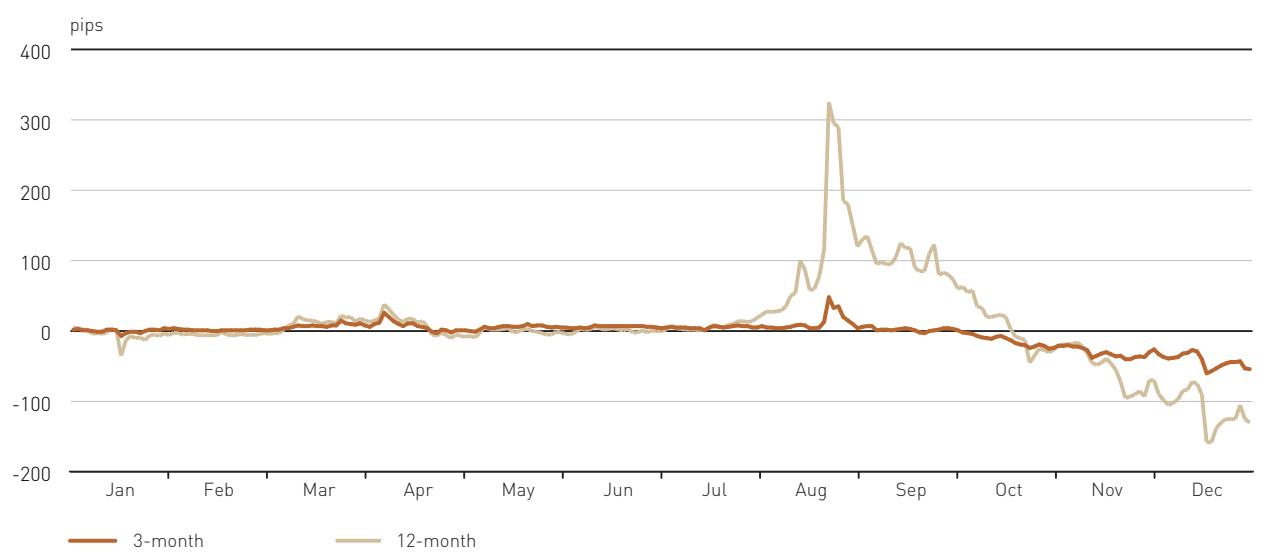
<sup>1</sup> In accordance with the revised Base Rate formula announced on 26 March 2009, the Base Rate is currently set at either 50 basis points above the lower bound of the prevailing target range for the US Federal Funds Rate or the average of the five-day moving averages of the overnight and one-month HIBORs, whichever is the higher.

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**Chart 3** Hong Kong dollar interbank interest rates in 2015



**Chart 4** Hong Kong dollar forward points in 2015



## Linked Exchange Rate System

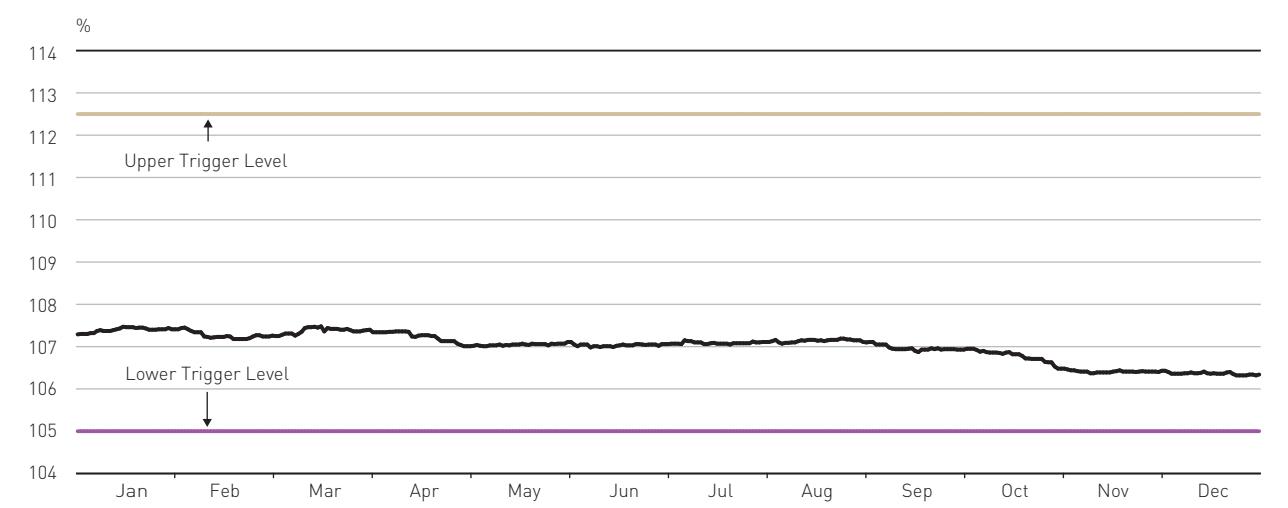
Since its establishment in 1983, the Linked Exchange Rate System (LERS) has continued to function smoothly and contributed significantly to Hong Kong's monetary and financial stability over the past few decades. Given Hong Kong's small and open economy and its role as an international financial hub, the LERS remains the most suitable exchange rate regime for Hong Kong. The Hong Kong SAR Government is firmly committed to maintaining the LERS. Indeed, stability in the foreign exchange and money markets further reinforces the credibility of the

Government's commitment, and the public continues to have strong confidence in the Hong Kong dollar as a means of payment and storage of value. In its 2015 Article IV consultation with Hong Kong, the International Monetary Fund (IMF) continued to endorse the LERS as the best monetary arrangement for Hong Kong, citing Hong Kong's robust institutional, legal and policy framework, ample fiscal reserves, flexible markets, and sound financial system as key factors supporting the smooth functioning of the LERS.

Given that a robust banking system is crucial to the normal functioning of the LERS, the HKMA continued to closely monitor banks' management of credit, liquidity and interest rate risks and stress-test results, and stepped up its supervisory efforts on banks' corporate and property-related lending to enhance the resilience of the banking sector. In view of the rise in US interest rates, the HKMA reminded the public to make necessary preparations in managing risks, noting that any triggering of the weak-side CU and outflow of Hong Kong dollars are a natural and necessary step in the process of the normalisation of the Hong Kong dollar interest rates.

To improve the transparency of the Currency Board Account, a specific portion of Exchange Fund assets has been allocated to back the Monetary Base since October 1998. The Backing Ratio (defined as the Backing Assets divided by the Monetary Base) moved within a narrow range of 106.3–107.5% during 2015, without touching the Upper or Lower Trigger Level. The ratio closed at 106.3% on 31 December (Chart 5). Under the LERS, while specific Exchange Fund assets have been designated for the Backing Portfolio, all Exchange Fund assets are available to support the Hong Kong dollar exchange rate. The large amount of financial resources of the Fund provides a powerful backstop to protect Hong Kong's monetary and financial stability in the event of abrupt shocks.

**Chart 5 Daily movement of the Backing Ratio in 2015**



### Other activities

The Exchange Fund Advisory Committee (EFAC) Currency Board Sub-Committee monitors and reviews issues relevant to monetary and financial stability in Hong Kong. In 2015, the Sub-Committee considered issues including the supply of international US dollar loans by global banks, the international use of macro-prudential measures, the implications of US interest rate hikes for Hong Kong's

property market, the formula for the determination of the Base Rate, macroeconomic implications of the Hong Kong dollar real effective exchange rate rise, and the sovereign risk of emerging market economies. Records of the Sub-Committee's discussions and the reports on Currency Board operations submitted to the Sub-Committee are published on the HKMA website.

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The Hong Kong Institute for Monetary Research (HKIMR) continued to sponsor research in the fields of monetary policy, banking and finance. In 2015, the Institute hosted 16 research fellows and published 27 working papers.

The Institute organised five international conferences and workshops. The main ones included:

- The Sixth Annual International Conference on the Chinese Economy in January, under the title "Leverage and Financial System Efficiency and Stability: Chinese and International Experiences". 11 high quality research papers were presented at the conference, covering an extensive range of issues such as corporate leverage in China, China's credit boom and business cycle, banking competition and financial stability, as well as banking regulation and credit supply.
- The HKIMR and the University of Hong Kong joint conference entitled "HKIMR-HKU International Conference on Finance, Institutions and Economic Growth" in May. The conference covered many different economic issues, including banking and monetary policy, international financing and cross border mergers and acquisitions, design of financial regulation, as well as macroeconomic environment and capital markets.
- The HKIMR, the Board of Governors of the Federal Reserve System, the European Central Bank and the Federal Reserve Bank of Dallas joint conference in October on "Diverging Monetary Policies, Global Capital Flows and Financial Stability". The conference examined a wide range of issues including the relationship between monetary policies, international capital flows and exchange rates, divergent monetary policies and their implications for global financial stability, spillover of major central bank policies to other parts of the world, and the costs and benefits of global policy co-ordination.

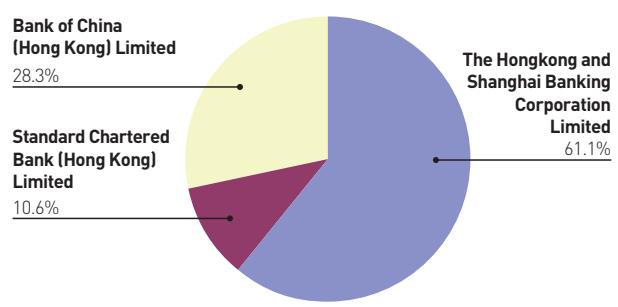
The Institute also hosted its 13th HKIMR Summer Workshop in August, and the 13th HKIMR Conference on the Mainland Economy in September, addressing issues on fiscal reform and local government financing in Mainland China. The conferences and workshops were attended by participants from academia, the financial services industry and global central banks. In addition, the Institute held 24 public seminars during the year covering a broad range of economic, monetary and financial issues.

## Notes and coins

At the end of 2015, the total value of banknotes in circulation was HK\$360.2 billion, an increase of 5.3% from a year earlier (Charts 6, 7 and 8). The total value of government-issued notes and coins in circulation amounted to HK\$11.2 billion, up 2.9% (Charts 9 and 10). The value of government-issued HK\$10 notes in circulation was HK\$4.0 billion, of which 85% were polymer notes.

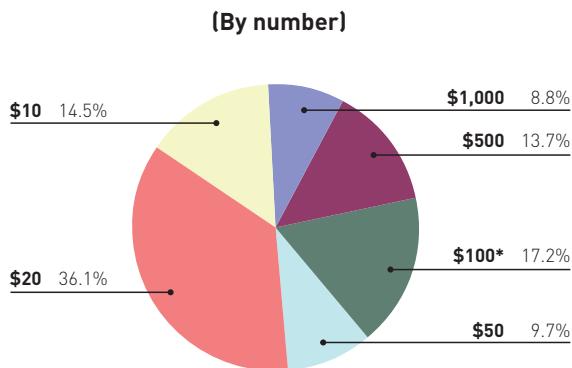
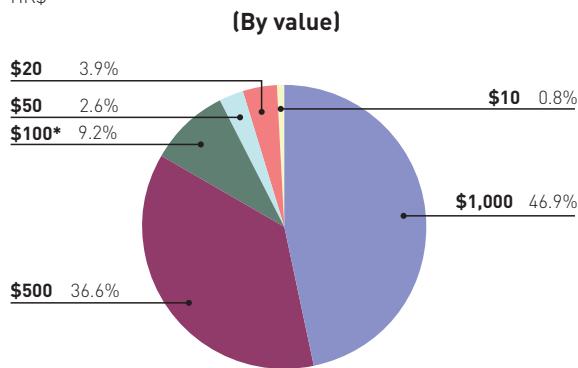
Chart 6

Banknotes in circulation by note-issuing banks at the end of 2015



**Chart 7****Distribution of banknotes in circulation at the end of 2015**

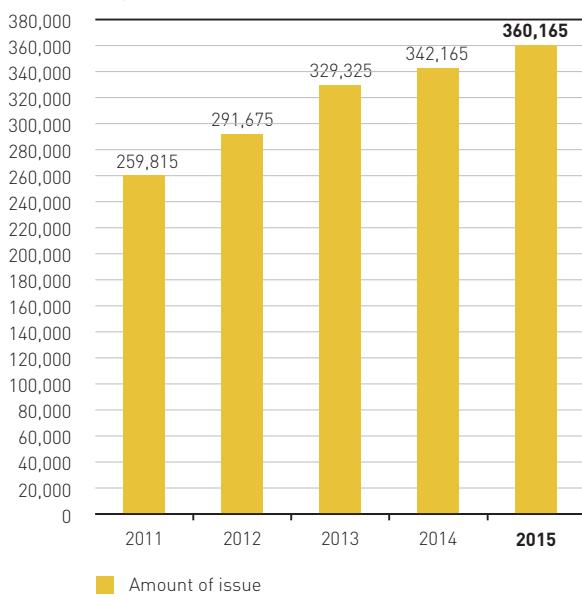
HK\$



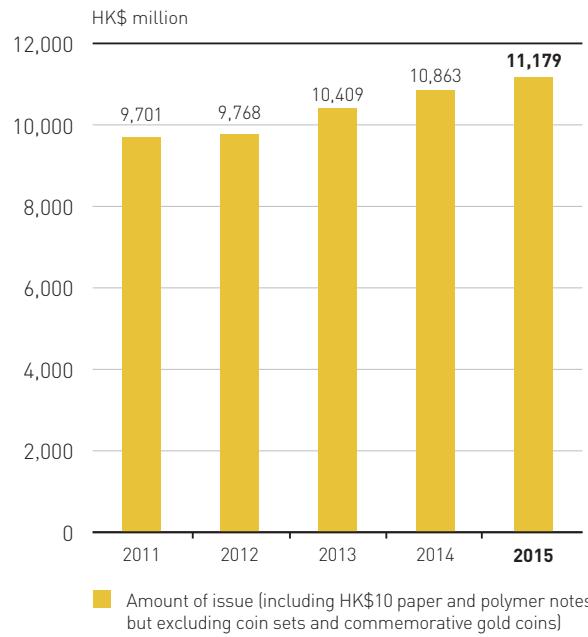
\* Includes 0.1 percentage point contributed by HK\$150 banknotes.

**Chart 8****Banknotes in circulation at the end of 2015**

HK\$ million

**Chart 9****Government-issued notes and coins in circulation at the end of 2015**

HK\$ million

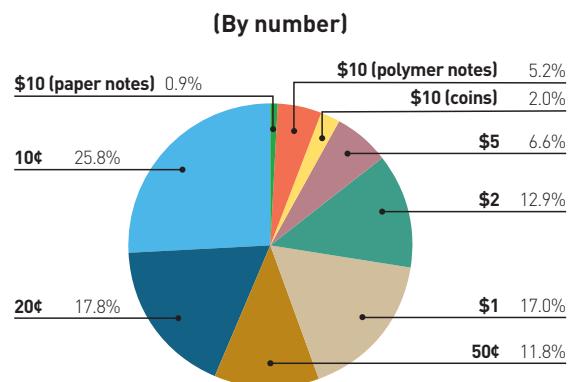
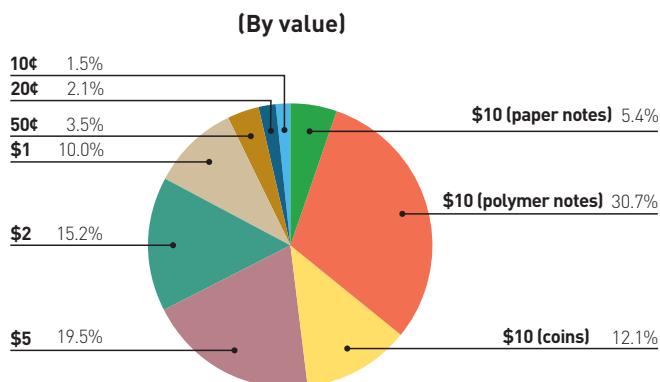


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Chart 10

Government-issued notes and coins in circulation at the end of 2015

HK\$



## Hong Kong banknotes

During the year, the HKMA announced a plan to launch a new series of banknotes. While the latest series, which was launched in 2010, remains robust, it is important to update the banknotes with the latest security features to stay ahead of counterfeiters.

In addition, the HKMA continued its public education programme to promote awareness of the designs and security features of Hong Kong's banknotes. In all, 26 seminars on how to authenticate banknotes were provided during the year for over 5,000 participants, including bank tellers, retailers and students.

## Coin collection programme

The Coin Collection Programme, launched in October 2014, continued to be well-received by the public. It is the world's first structured coin collection scheme using two mobile trucks and was awarded the "Best New Coin Innovation" by the International Association of Currency Affairs at the annual Coin Conference in Madrid in October. The award recognised the programme's innovative and

green approach to the collection of coins which are re-circulated to meet public demand, making circulation more efficient and reducing the need for minting new coins.

All 18 districts in Hong Kong are covered on rotation by the free service of the two coin carts. Each cart is equipped with two high-speed coin counting machines and an electric wheelchair lift. Staff are on hand to provide assistance and users can choose to exchange their spare coins for banknotes or adding value to their Octopus cards. A Community Chest donation box is also placed inside each vehicle. The two-year pilot Coin Collection Programme runs until September 2016, when it will be subject to review.

Since its inception to the end of 2015, the two coin carts have served 150,000 people and collected 129 million coins with a total face value of HK\$140 million. Further details of the programme and up-to-date information, including the service schedule, are available on a designated page of the HKMA website at [coincollection.hkma.gov.hk](http://coincollection.hkma.gov.hk).

## Exchange Fund Bills and Notes

The strong-side CU was triggered multiple times in April, September and October, leading to an expansion in the Aggregate Balance. With short-dated Exchange Fund Bills trading at very low yields amid abundant liquidity in the interbank market, the HKMA issued a total of HK\$75 billion worth of additional Exchange Fund Bills between August and December to meet market demand. The additional issuance resulted in a corresponding decrease in the Aggregate Balance. At the end of 2015, the amount of outstanding Exchange Fund paper stood at HK\$828.4 billion (Table 2).

## PLANS FOR 2016 AND BEYOND

The global macro-financial environment is expected to be challenging in 2016, given the US interest rate normalisation, subdued global economic growth and high volatility in international financial markets. Fund flows are likely to be more volatile. The US interest rate lift-off last December kick-started the process of interest rate normalisation. Since then, there have been some outflows of funds from Hong Kong, driving up Hong Kong dollar

interbank rates and narrowing the spreads between the Hong Kong dollar and US dollar interest rates. However, since the pace of further US interest rate rises is expected to be gradual and given the sizable Hong Kong dollar Monetary Base, any adjustment in Hong Kong dollar interbank interest rates should not be too rapid. With expected outflow of funds from Hong Kong, the Hong Kong dollar will eventually weaken to 7.85, the weak-side CU. This is inevitable in the process of normalisation of the Hong Kong dollar interest rates, and reflects the design and normal operations of the LERS.

The HKMA will continue to closely monitor risks and vulnerabilities in the domestic and external environment and stands ready to deploy appropriate measures, where necessary, to maintain monetary and financial stability in Hong Kong. Research programmes in 2016 will study issues affecting the Hong Kong economy and assess their potential impact. The EFAC Currency Board Sub-Committee will continue to examine issues relevant to Hong Kong's monetary and financial stability, review the technical aspects of the Currency Board arrangements and, where appropriate, recommend measures to strengthen them.

**Table 2 Outstanding issues of Exchange Fund Bills and Notes**

HK\$ million	2015	2014
Exchange Fund Bills (by original maturity)		
28 days	3,000	-
91 days	447,621	400,730
182 days	277,000	241,000
364 days	42,200	42,200
Sub-total	769,821	683,930
Exchange Fund Notes (by remaining tenor)		
1 year or below	15,200	14,900
Over 1 year and up to 3 years	20,800	25,600
Over 3 years and up to 5 years	7,200	11,200
Over 5 years and up to 10 years	10,600	11,000
Over 10 years	4,800	6,000
Sub-total	58,600	68,700
<b>Total</b>	<b>828,421</b>	752,630